

Sharan Dhar
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Current research Interest

3-D porous material Metal-Organic Framework (MOF) and Covalent-Organic Framework (COF).

Previous Research Interest

Organic Synthesis, Medicinal Chemistry, Drug Discovery, Phytochemistry.

Education

Temple University, Philadelphia, USA 2021-Present

Ph.D., Department of Chemistry.

Mentor: Dr. Eric Borguet

Current CGPA: 3.91

University of Dhaka, Dhaka, Bangladesh 2017-2018

Master of Pharmacy (M.Pharm.), Clinical Pharmacy and Pharmacology

CGPA: 3.83

University of Dhaka, Dhaka, Bangladesh 2013- 2017

Bachelor of Professional Pharmacy (B.Pharm.), 5-year Professional degree

CGPA: 3.84/4.00 (WES evaluated CGPA: 3.92/4.00)

GRE SCORE-311(V-150, Q-161), TOEFL SCORE- 102

RESEARCH EXPERIENCES

PhD Research:

Project-1: Capturing and degradation of toxic chemicals *via* Zr-MOF

Project-2: Zirconium hydroxide catalyzed oxidation of the sulfanyl group using covalent organic framework as support.

Project-3: Evaluation of photocatalytic property of nanomaterials for CWA degradation.

M.Pharm. Thesis Project

Synthesis and biological investigation of derivatives of benzimidazole, a potential heterocycle for new drug development (antifungal, anthelmintic and antibacterial). (January 2019- Present).

- Synthesis and characterization of benzimidazole derivatives.
- Evaluation of antifungal, anthelmintic and antibacterial activity.

B.Pharm. Final Project

Extraction and biological investigation of *Crataeva nurvala* extract, a potential medicinal plant with numerous traditional usage. (March 2018 – May 2018)

- Prepared plant extract.
- Evaluated *in vitro* antioxidant, cytotoxicity, antimicrobial activity and *in vivo* analgesic activity of the extract.

Undergraduate Projects

1. Isolation and characterization of the chemical constituents of *Epipremnum aureum*. (May 2017 – October 2017)

- Isolated compounds from the plant extract.
 - Chemical characterization of the compounds.
2. A survey project on retail pharmacists about their dispensing knowledge of antibiotics and its impact on antibiotic resistance. (April 2016 – September 2016)
 - Prepared survey questionnaires and conducted the survey.
 - Performed statistical analysis and prepared survey report.
 3. Synthesis, characterization and biological evaluation of transition metal complexes of indomethacin. (April 2015 – October 2015)
 - Synthesized organometallic compounds of indomethacin.
 - Evaluated anti-inflammatory, analgesic and antipyretic effects on animal model.
 4. Chemical synthesis, characterization and pharmacological evaluation of benzimidazole derivatives. (May 2014- October 2014)
 - Synthesized and characterized benzimidazole derivatives.
 - Evaluated anti-tumor, analgesic, antithrombotic and antimicrobial effects on animal model and humane cell line.

Internship

SPSS Training – Institute of Statistical Research and Training. (April 2018- May 2018)

- Learned how to use different functionalities of SPSS software.
- Analyzed practical data with SPSS

Hospital Training – Dhaka Medical College Hospital. (April 2017- October 2017)

- Checked the rationality of prescriptions and take patients history.
- Conducted patients counseling.

Industrial Training – Glaxo Smith Kline Ltd. (February 2016- March 2016)

- Had exposure to large scale manufacturing of different dosages form.
- Gained an overall experience of pharmaceutical manufacturing in an established facility.
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POSTER PRESENTATION

1. **Sharan Dhar**, Fahad Hossain, 2018. “*Crataeva nurvala*; a potential medicinal plant with numerous traditional usage and a way to pharmacological rationalization”. Poster presentation at ISE-SFEC National Conference, 2018, Dhaka, Bangladesh.
 - Presented an overview of the plant.
 - Emphasized on the extraction process and biological activity testing.
2. **Sharan Dhar**, Dr. Hao Li, Dr. Venkata Swaroopa Datta Devulapalli and Eric Borguet: “Temperature programmed desorption study to evaluate MOFs potential for CO₂ capture” 2023 Philadelphia Inorganic Colloquium, The College of New Jersey, New Jersey, NJ, USA. April 22, 2023.

CONFERENCES & WORKSHOPS

- Basic training on structure-based drug design. (26/8/2017- 28/8/2017)
- Advanced training on next-generation drug discovery. (23/4/2017- 27/4/2017)
- Workshop on computational tools for cancer research. (26/8/2016- 28/8/2016)
- Workshop on pharmaceutical science and career option for beginners by GUSTO. (4/3/2014- 6/3/2014)

SKILLS

- **Technical Skills:** HPLC, GLC, IR Spectroscopy, UV-Vis Spectroscopy, Rotary Evaporator, TLC, CC, GC-MS etc.

- **Computer Skills:** BIOVIA, Discovery Studio, IBM SPSS, PyRx, PyMOL, RasMOL, Chemdraw, Sci-finder, AutoDock, etc.

Teaching Experience in Temple University

2021-Fall Semester- TA for Organic Chemistry-II Laboratory
2022-Spring Semester-TA for Organic Chemistry-II Laboratory
2022-Summer- TA in LSAMP Program

RELEVANT COURSEWORK

PhD: Analytical separation, Special topics in physical chemistry, Nanomaterial physics and chemistry, Microscopy and microanalysis, Special topic in analytical chemistry

Bachelor of Professional Pharmacy: Organic Chemistry, Physical Chemistry, Biochemistry & Molecular Biology, Pharmacology, Pharmaceutical Technology, Anatomy, Physiology, Medicinal Chemistry, Applied Microbiology, Clinical Pathology, Disease Management, Clinical Pharmacy, Biopharmaceutics, Clinical Research & Clinical Pharmacokinetics, Pharmaceutical Biotechnology, Pharmaceutical Analysis, Quality Control & Analytical Method Validation, Mathematics (Calculus) & Statistics, Biostatistics & Bioinformatics – **(each 2-6 semesters long).**

Master of Pharmacy: Clinical Pathology Advanced Pharmacology, Drug Use Management, Toxicology, Molecular Pharmacology, Research Methodology.

EXTRACURRICULAR ACTIVITIES

Active member of **Pharmacy Student Association of Jagannath Hall, Social Welfare Club of Pharmacy Students, Pharmacy Cricket Association, DU** and Chief coordinator of **Smile in Life** foundation.

Awards:

National Science and Technology (NST) fellowship (2018-2019), Ministry of Science and Technology, Government of the People's Republic of Bangladesh.

